I Claim:

1. A slit scan image capture system for obtaining slit images of a patient's eyes comprising:

at least two slit image sources;

at least two rapid switching light sources, wherein one of the light sources is associated with one slit image, such that at least two slits may be illuminated on the patient's eyes;

at least two motors, each connected to the slit image sources for incrementally moving the illuminated slits across the eye to a plurality of positions;

a video camera for capturing images of the illuminated slits on the eye;

a frame grabber connected to the video camera for storing the captures images; and

wherein the rapid switching light sources power-up to approximately a full-power state and power-down to an effectively off state in an amount of time less than the amount of time required by the motor to move a slit image from one position to a next position, thereby minimizing an amount of time required to capture a plurality of slit images across major portions of the patient's eyes.

2. The invention of claim 1, wherein the rapid switching light sources are lasers or light emitting diodes.

3. The invention of claim 1, wherein the motor moves the slit masks from one position to a next position in about 1/60 of a second.

4. The invention of claim 1, wherein the frame grabber is an interlaced frame grabber.

5. The invention of claim 1, wherein the frame grabber is a progressive scan frame grabber.

6. The invention of claim 1, wherein the light sources power-up or power-down in less than 100 microseconds.

7. A slit scan image capture system for obtaining slit images of a patient's eyes comprising:

at least first and second slit image sources;

at least first and second rapid switching light sources, wherein the first light source is associated with the first slit image source and the second light source is associated with the second slit image source such that at least two slit images may be illuminated on the patient's eyes;

a video camera for capturing images of the illuminated slits on the eye;

an interlaced frame grabber connected to the camera for storing the captured images; and

a controller for controlling the switching of the light sources and the movement of the slit image sources wherein as the first light source is powered-up so that a slit image is illuminated on the eye via the first slit image source, the second light source is powered-down and the second slit image source is caused to move to a next position, such that a time to power-up or power-down a light source is less than the time required to move a slit image source to a next position relative to the patient's eyes, thereby allowing each field of an interlaced frame to contain

data from both the first and second slit image source's images illuminated on the patient's eyes.

8. The invention of claim 7, wherein the rapid switching light sources are lasers or light emitting diodes.

9. The invention of claim 7, wherein the controller includes motors connected to slit masks or movable mirrors for incrementally moving the illuminated slits across the eyes to a plurality of positions.

10. The invention of claim 9, wherein the motors move the slit source from one position to a next position in about 1/60 of a second.

11. The invention of claim 7, wherein the light sources power-up or power-down in less than 100 microseconds.

12. A method of operating a slit scan imaging system for obtaining slit images of a patient's eyes comprising the steps of:

providing at least first and second slit image sources;

associating first and second rapid switching light sources with each slit image source for illuminating slit images on the patient's eyes;

providing a video camera for capturing images of the illuminated slits on the eyes;

connecting an interlaced frame grabber to the video camera for storing the captured images; and

controlling the switching of light sources and the movement of the slit image sources wherein as the first light source is powered-up so that a slit image is illuminated on the eye via the first slit image source, the second light source is powered-down and the second slit image source is caused to move to a next position such that a time to power-up or power-down a light source is less than the time required to move a slit image source to a next position relative to the patient's eye, thereby allowing each field of an interlaced frame to contain data from both the first and second slit image source's images illuminated on the patient's eye.

13. The method of claim 12, wherein the light sources are lasers or light emitting diodes.

14. The method of claim 12, wherein the time to power-up or power-down a light source is less than 100 microseconds.

15. The method of claim 12, wherein the controlling step includes connecting motors to each of a slit mask or a movable mirror for moving the illuminated slits across the patient's eyes.

16. The method of claim 12, wherein the motors move a slit mask or a movable mirror from one position to a next position in about 1/30 of a second.